



Assessing the sustainability of improved vegetable varieties in southern Mali: A gender perspective

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Introduction

- The development and dissemination of improved vegetable varieties in southern Mali can contribute towards higher yields and income and decrease malnutrition.
- In southern Mali women are often targeted for vegetable farming interventions as this is considered a woman's field of activity.

However...

- The documentation of gender-disaggregated trait preferences of improved vegetable varieties is scant.
- An in-depth assessment of local farming practices and of the market integration of women and men vegetable producers has not yet been conducted in the field of vegetable breeding in Mali.

Are benefits introduced by genetic innovation interventions sustainable for women and men vegetable producers in southern Mali?

Methodology

- Study sites:** 9 communities in the districts of Koutiala and Bougouni (Sikasso region)
- Sample:** 75 vegetable producers (56 women, 19 men)
- Intervention design (2 phases):**
 - Innovation bundles comprising improved seeds of tomato (*Solanum lycopersicum* L.) and African eggplant (*Solanum aethiopicum* [L.]), biopesticides, mineral fertilizer, and training on good farming practices provided to farmers for on-farm experimentation.
 - Participatory assessment of farmers' experimentations through research tools designed as per the Sustainable Intensification Assessment Framework (SIAF) [Figure 1]:
 - Survey questionnaire
 - Gender-separate focus group discussions
 - Matrix scoring exercise (a tool for participatory varietal evaluation) [Photo 1]



Photo 1: Participatory evaluation of experimented African eggplant varieties. Evaluation criteria were developed according to SIAF indicators [Photo credit: Africa RISING/West Africa project]

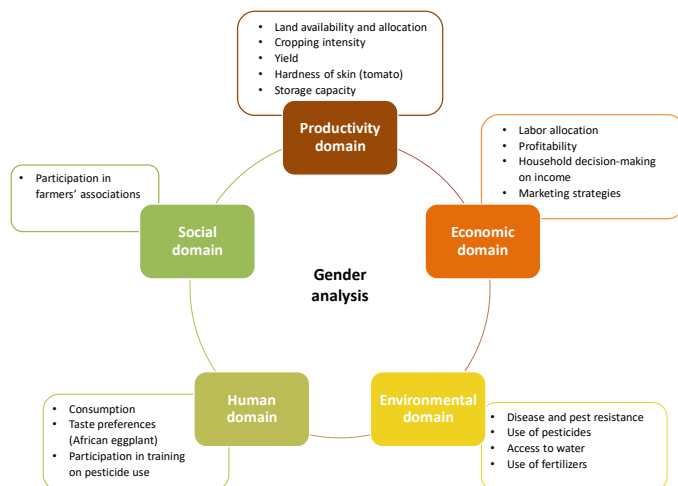


Figure 1: Domains and indicators for the assessment of genetic intensification interventions as per the Sustainable Intensification Assessment Framework (SIAF)

Results

Women's and men's strategies to cope with constraints in vegetable production highlight strong gender inequalities in vegetable farming. Access to resources and finance, time management, and mobility influence farmers' trait preferences for tomato and African eggplant varieties [Table 1].

Table 1: Enabling and constraining conditions of production and trait preferences for women and men farmers

	Enabling/Constraining conditions for vegetable producers	Preferred traits
WOMEN	Limited control over farming assets and inputs	• Abiotic stress resistance • Biotic stress resistance
	Time-management issues	• Short growing cycle
	Inadequate storage facilities causing post-harvest losses	• Long storage life
	Interest in new market opportunities	• Large fruit size • Fruit pulp • Sweet flavor (specific for eggplant) • High yield (despite lower market price)
MEN	Limited availability of nutritious food	• Vitamin content
	Interest in versatile varieties for cooking	• Taste • Good yield • Pulp density • Soft consistency gained during cooking
	Inadequate storage facilities causing post-harvest losses	• Long storage life
	Interest in new market opportunities	• Taste • Color • Large fruit size
	Limited capacity to deal with pests and diseases	• Resistance to local pests
	Interest in tasty varieties for consumption or sale	• Sweet flavor (specific for eggplant)

The persistence of gender inequalities in the field of vegetable farming prevents women benefitting from the introduction of improved varieties and undermines the long-term sustainability of breeding interventions.

Recommendation

The introduction of improved varieties should be conducted along with activities that tackle gender constraints in the context of intervention.



The Africa Research In Sustainable Intensification for the Next Generation (Africa RISING) program comprises three research-for-development projects supported by the United States Agency for International Development as part of the U.S. government's Feed the Future initiative.

Through action research and development partnerships, Africa RISING will create opportunities for smallholder farm households to move out of hunger and poverty through sustainably intensified farming systems that improve food, nutrition, and income security, particularly for women and children, and conserve or enhance the natural resource base.

The three projects are led by the International Institute of Tropical Agriculture (in West Africa and East and Southern Africa) and the International Livestock Research Institute (in the Ethiopian Highlands). The International Food Policy Research Institute leads an associated project on monitoring, evaluation and impact assessment.

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